

NanoCharacter is a public private partnership to create a framework and roadmap to implement clear reporting of nanomaterial characterization data across studies. With issues of financing, standards, instrumentation, academic and regulatory acceptance addressed in the roadmap, NanoCharacter will enable the implementation of consistent reporting and creation of knowledge across studies.



THE NEED FOR NANOCHARACTER

Focusing on standardization of data reporting for nanomaterials in human and environmental risk assessment, NanoCharacter starts from the observation that progress in evaluating the safety of emerging materials and products is limited by poor material characterization in published studies. Despite advances in funding and research on safety and development of minimum characterization guidelines within the standards development and research communities, there has been limited progress toward standard characterization. Impediments to poor characterization include a lack of coordination among funding sources for measurement requirements, development of instrumentation and standard methods, regulatory acceptance, relationship of material characteristics to biologic effect, and priority setting. NanoCharacter will develop a framework and roadmap to address these impediments and improve the quality and utility of nanomaterial research supporting human and environmental risk assessment of nanomaterials. The project will aim to achieve broad acceptance and use of principles of data reporting so that studies using the principles can be better understood, reproduced, and combined with other studies of similar nanomaterials to create knowledge about the safety of uses of this technology.

Through better reporting and the resulting knowledge-generation NanoCharacter will facilitate development of sustainable, safe nanomaterial applications in such diverse fields as medicine, electronics, energy production, cosmetics, packaging, food manufacturing, and many other fields. The critical issues of safety and innovation in public health bring the interests of a wide variety of stakeholders to the table in this partnership.

GOAL AND APPROACH

NanoCharacter's goal is to achieve a robust basis of knowledge for human and environmental risk assessment through consistent reporting of material characterization information in nanomaterial studies. The project will focus on the adoption of consistent characterization within and among separate fields of study and on building consensus internationally and across stakeholder groups. If fully funded the project will establish a multi-stakeholder panel to monitor and report on implementation and to adapt the roadmap as necessary to facilitate adoption of consistent characterization and reporting.

The specific stages of the project are to 1) gather the leading experts from past "standard data set" efforts, 2) identify and interview stakeholders regarding the impediments to consistent characterization, 3) developing a framework outline for overcoming the impediments, 4) holding a workshop to establish the framework and roadmap to overcome the impediments, 5) finalizing and publishing the document, and 6) increasing awareness and acceptance of the proposed framework and roadmap.

PROGRESS

The Project Planning Chairs and invited experts have met twice via webinar to provide input to the draft framework document. A workshop will be held on January 10-11, 2013 co-funded by the National Science Foundation, the Institute of Food Technologists, ILSI North America Food and Chemical Safety Committee, the Nanotechnology Panel of the American Chemistry Council and in-kind contributions by the University of Michigan Risk Science Center and the Center for Risk Science Innovation and Application of the ILSI Research Foundation.

NanoCharacter is currently seeking additional partners for both in-kind contribution and operations funding.

Project Planning Chairs

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Expert Participants (so far)*

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**Participation in prior calls does not indicate acceptance of the goals or outcomes of the project. However, throughout the project we will seek to identify and reach out to stakeholders in this issue.*

SPONSORS

